UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
DAO, THUY CHAN

ART UNIT	PAPER NUMBER
2192	

NOTIFICATION DATE	DELIVERY MODE
03/26/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2008*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____ .

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20090320

DETAILED ACTION

1. This action is responsive to the amendment filed on December 19, 2009.

2. Claims 1-30 have been examined.

Response to Amendments

3. In the instant amendment, claims 1, 8 and 12 have been amended.

Claim 8, line 6, the phrase is considered to read as - -...*for at least [[of]] a portion*...- -.

Response to Arguments

4. Applicants' arguments have been considered.

A) Independent claims 1 and 8 (Remarks, pp. 8-11):

After further consideration, the examiner notes that Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action as set forth in details below.
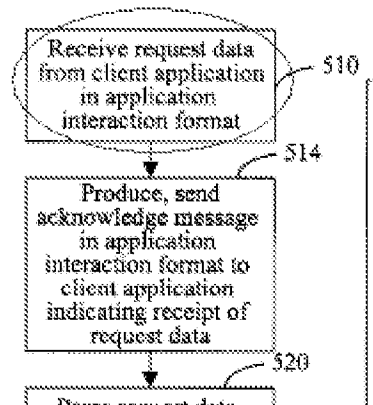
B) Independent claims 12 and 22 (Remarks, pp. 11-12):

Limitations at issue "*a software service operable to receive a transaction request and to generate a first object associated with the transaction request; an object generator operable to convert the first object into a first document written in a self-describing language*" (claim 12, lines 3-6).

As an initial matter, the examiner notes that the Applicants argued about FIG. 16 of the reference Yeh but did not fully respond to all ground of rejection, which relied on at least FIG. 17 of the reference Yeh.

As set forth in page 8 of the previous Office action mailed September 19, 2008, Yeh explicitly teaches:

a software service operable to receive a transaction request, e.g., FIG. 17, blocks 510-514, col.20: 59 – col.21: 14, i.e., server receiving request from client application:

to generate a first object associated with the transaction request (e.g., FIG. 17, block 514-532, col.19: 24 – col.20: 24, i.e., generating server application-specific data:
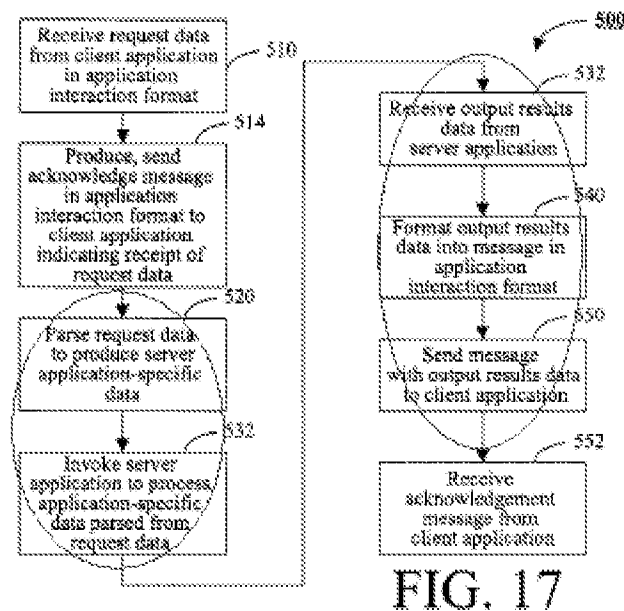

FIG. 17

an object generator operable to convert the first object into a first document written in a self-describing language (e.g., FIG. 17, col.11: 24 – col.12: 63, block 532, converting server application-specific into message in application interaction format in block 540; and block 550 send said message written in XML ("self-describing language" comprises XML as further recited in claim 2) to client application).

In conclusion, the examiner respectfully maintains ground of the 35 USC §102 rejection over claims 1-30.

Claim Rejections – 35 USC §101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. As set forth in the previous Office action mailed September 19, 2008, claims 12-21 are rejected because the claimed invention is directed to non-statutory subject matter: independent claim 12 directs to "A transaction processing system", which may comprise only software components such as "a software service", "an object generator", and "a document generator" (e.g., FIG. 3 and related text).

In the instant amendment, the Applicant added new limitation "one or more processing units operable to execute...". The examiner notes that "one or more processing units operable to execute" as defined/described in the originally filed disclosure may be:

i) FIG. 2, page 7:16-33, "Schema Generator" 34 (a software processing unit) operable to execute software modules/classes included in said Schema Generator to receive a message defined from "Message Definitions" 3 and generate a first object such as "Schema" 36 as recited in claim 12 lines 3-5;

ii) FIG. 2, page 6:17-29, "The components of architecture 30 may comprise software applications..." (software processing units) operable to execute "Object Generator" 38 to convert the first object ("Schema" 36) into a first document as recited in claim 12, lines 5-6.

Accordingly, the claimed limitation "one or more processing units operable to execute" still may direct to only software processing units/modules which may be operable to execute/call other software processing units/modules, but not necessary central processing units (CPUs) as hardware processing units (emphasis added).

Claim 12 amounts to Functional Descriptive Material: "Data Structures" representing descriptive material per se or "Computer Programs" representing computer listings per se.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. See MPEP 2106.

Dependent claims 13-21 do not cure the deficiencies as noted above, thus, also amount to Functional Descriptive Material: "Data Structures" representing descriptive material per se or "Computer Programs" representing computer listings per se.

Under the principles of compact prosecution, claims 12-21 have been examined as the Examiner anticipates the claims will be amended to obviate these 35 USC § 101

issues. For example, - -A transaction processing system comprising: one or more [[processing]] processor units operable to execute... - - as disclosed in FIG. 1, processor 12, and the specification, page 5, lines 7-19.

Claim Rejections – 35 USC §102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Yeh (art of record, US Patent No. 6,772,216).

Claim 1:

Yeh discloses *a schema generator* (e.g., FIG. 1, col.11: 24 – col.12: 63), *comprising: a computer readable storage medium; computer software stored on the computer readable storage medium and operable to:*

parse a plurality of transaction definitions for a software system (e.g., FIG. 1, col.11: 41 – col.12: 31, parsing a message sent from Client Application 36, wherein said message may be different message types (transaction definitions) such as "request", "reply", "cancel", "publish", "notify" ... in FIG. 13; FIG. 2, col.14: 43 – col.15: 58, parsing a message from Requesting Application Logic 54),

wherein each transaction definition comprises one or more parameters (e.g., FIG. 13, each message type (transaction definition) comprises different data inputs (parameters) in FIG. 5, col.7: 40 - col.8: 59)*; and*

generate, in response to parsing the plurality of transaction definitions, a plurality of schema definitions for at least a portion of the parsed transaction definitions (e.g., FIG. 1, col.12: 32 – col.13: 29, generate Application Interaction messages 40 including tags/entities (schema definitions) and send them to Commerce Exchange Server 10),

wherein the schema definitions are written in a self-describing language (e.g., Application Interaction messages 40 written in XML (a self-describing language comprises XML as further recited in claim 2), col.15: 12-39);

wherein a first schema definition is operable to map the one or more parameters associated with a first transaction definition to a first document written in the self-describing language (e.g., FIG. 1, col.11: 24-57, mapping data inputs from the messages (transaction definition) sent from Client Application 36 to XML Application Interaction messages 40 (first document), col.12: 32-63); *and*

wherein a second schema definition is operable to map a second document written in the self-describing language (e.g., FIG. 1, col.12: 56 – col.12: 48, Commerce Exchange Server 10 generates Application Interaction message 40 including tags/entities (second schema definition) to map said Application Interaction message 40 also written in XML)

to the one or more parameters associated with a second transaction definition (e.g., FIG. 1, Commerce Exchange Server 10 maps to data inputs (parameters) associated with another type of message such as "reply", "notify", "acknowledge" in FIG. 13-14; and also in FIG. 9, first document "Request" 90 → second document "Acknowledge" 91 or first document "Cancel" 94 → second document "Reply" 92).

Claim 2:

Yeh discloses *the schema generator of Claim 1, wherein the self- describing language comprises Extensible Markup Language (XML) or any version thereof* (e.g., col.11: 4 – col.12: 21).

Claim 3:

Yeh discloses *the schema generator of Claim 1, wherein the self- describing language comprises HyperText Markup Language (HTML) or any version thereof* (e.g., col.14: 43 – col.15: 12).

Claim 4:

Yeh discloses *the schema generator of Claim 1, wherein the self-describing language comprises a language that employs hypertext* (e.g., col.2: 23-44).

Claim 5:

Yeh discloses *the schema generator of Claim 1, wherein the software system comprises an Information Management System (IMS)* (e.g., col.1: 32-62; col.4: 26-65).

Claim 6:

Yeh discloses *the schema generator of Claim 1, wherein the transaction definitions are associated with a message format service* (e.g., col.7: 1-26; col.8: 42-58).

Claim 7:

Yeh discloses *the schema generator of Claim 6, wherein the self- describing language comprises Extensible Markup Language (XML) or any version thereof* (e.g., col.9: 27-54).

Claim 8:

Yeh discloses *a method for generating a plurality of schema definitions* (e.g., FIG. 13, blocks 410 and 430-440, a plurality of schema definitions DTDs generated in response to the plurality of transaction message types, col.16: 21 – col.17: 30; col.17: 32 – col.18: 67), *comprising:*

parsing a plurality of transaction definitions for a software system, wherein each transaction definition comprises one or more parameters (e.g., FIG. 1, col.11: 41 – col.12: 31, parsing a message sent from Client Application 36, wherein said message

may be different message types (transaction definitions) such as "request", "reply", "cancel", "publish", "notify" ... in FIG. 13; FIG. 2, col.14: 43 – col.15: 58, parsing a message from Requesting Application Logic 54); *and*

generating, in response to parsing the plurality of transaction definitions, a plurality of schema definitions for at least a portion of the parsed transaction definitions (e.g., FIG. 1, col.12: 32 – col.13: 29, generate Application Interaction messages 40 including tags/entities (schema definitions) and send them to Commerce Exchange Server 10),

wherein the schema definitions are written in a self-describing language (e.g., DTDs written in XML, col.2: 45-67; col.12: 32-67; col.15: 59 – col.16: 31);

wherein a first schema definition is operable to map the one or more parameters associated with a first transaction definition to a first document written in the self-describing language (e.g., FIG. 1, col.11: 24-57, mapping data inputs from the messages (transaction definition) sent from Client Application 36 to XML Application Interaction messages 40 (first document), col.12: 32-63); *and*

wherein a second schema definition is operable to map a second document written in the self-describing language (e.g., FIG. 1, XML application interaction documents 40; FIG. 16, Protocol Plug-In 224 using DTDs to map an acknowledge message 310 or a reply message 340, both written in XML, col.16: 21 – col.17: 30; FIG. 17, block 540, format output results data into XML application interaction documents 40, col.20: 26 – col.21: 12)

to the one or more parameters associated with a second transaction definition (e.g., FIG. 1, Commerce Exchange Server 10 maps to data inputs (parameters) associated with another type of message such as "reply", "notify", "acknowledge" in FIG. 13-14; and also in FIG. 9, first document "Request" 90 → second document "Acknowledge" 91 or first document "Cancel" 94 → second document "Reply" 92).

Claim 9:

Yeh discloses *the method of Claim 8, wherein the self-describing language comprises Extensible Markup Language (XML) or any version thereof* (e.g., col.11: 4 – col.12: 21).

Claim 10:

Yeh discloses *the method of Claim 8, wherein the self-describing language comprises HyperText Markup Language (HTML) or any version thereof* (e.g., col.13: 43 – col.15: 12).
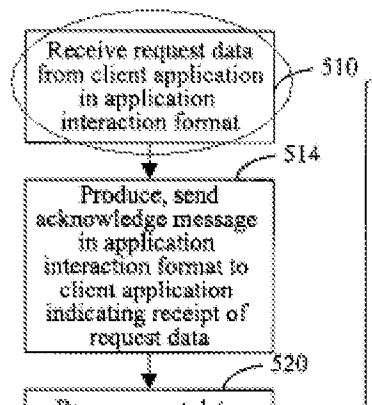
Claim 11:

Yeh discloses *the method of Claim 8, wherein the transaction definitions are associated with a message format service* (e.g., col.1: 32-62; col.4: 26-65).

Claim 12:

Yeh discloses *a transaction processing system, comprising one or more processor units* (e.g., FIG. 1, col.11: 24 – col.12: 63) *operable to execute:*

a software service operable to receive a transaction request, e.g., FIG. 17, blocks 510-514, col.20: 59 – col.21: 14, i.e., server receiving request from client application:

to generate a first object associated with the transaction request (e.g., FIG. 17, block 514-532, col.19: 24 – col.20: 24, i.e., generating server application-specific data:
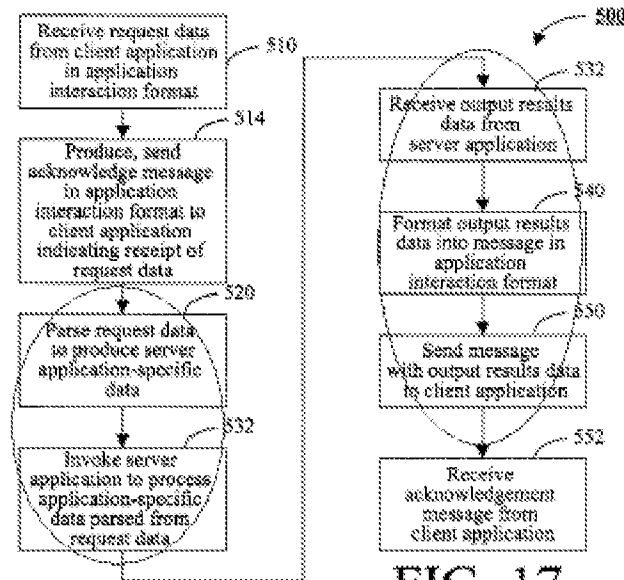

FIG. 17

an object generator operable to convert the first object into a first document written in a self-describing language (e.g., FIG. 17, col.11: 24 – col.12: 63, block 532, converting server application-specific into message in application interaction format in block 540; and block 550 send said message written XML ("self-describing language" comprises XML as further recited in claim 2) to client application);

a document generator operable to convert the first document into a first transaction message (e.g., FIG. 17, blocks 540-550, col.20: 59 – col.21: 14)

according to a schema associated with a first transaction type determinable from the first document (e.g., FIG. 13, FIG. 13, verifying transaction message types, col.19: 10 – col.20: 24; a plurality of schema definitions DTDs generated in response to the plurality of transaction message types, col.16: 21 – col.17: 30; col.17: 32 – col.18: 67).

Claim 13:

Yeh discloses *the transaction processing system of Claim 12, wherein the self-describing language comprises Extensible Markup Language (XML) or any version thereof* (e.g., col.9: 27-54).

Claim 14:

Yeh discloses *the transaction processing system of Claim 12, wherein the self-describing language comprises HyperText Markup Language (HTML) or any version thereof* (e.g., col.7: 1-26; col.8: 42-58).

Claim 15:

Yeh discloses *the transaction processing system of Claim 12, wherein the transaction generator is further operable to send the first transaction message to a message format service* (e.g., col.1: 32-2; col.4: 26-65).

Claim 16:

Yeh discloses *the transaction processing system of Claim 12,*

wherein the document generator is further operable to receive a second transaction message (e.g., col.14: 43 – col.15: 12) *and*

convert the second transaction message into a second document according to a schema associated with a second transaction type determinable from the second transaction message (e.g., col.11: 4 – col.12: 21); *and*

wherein the second document is written in the self-describing language (e.g., col.16: 21 – col.17: 30).

Claim 17:

Yeh discloses *the transaction processing system of Claim 16, wherein the object generator is further operable to convert the second document into a second object* (e.g., col.19: 24 – col.20: 24; col.20: 26 – col.21: 12).

Claim 18:

Yeh discloses *the transaction processing system of Claim 17, wherein the software service is further operable to receive the second object in response to the transaction request* (e.g., col.15: 59 – col.17: 32; col.19: 25 – col.20: 24).

Claim 19:

Yeh discloses *the transaction processing system of Claim 18, wherein the self-describing language comprises Extensible Markup Language (XML)* (e.g., col.11: 4 – col.12: 21).

Claim 20:

Yeh discloses *the transaction processing system of Claim 16, wherein the software service is further operable to receive the second document in response to the transaction request* (e.g., col.12: 32-48; col.15: 12-38).

Claim 21:

Yeh discloses *the transaction processing system of Claim 12, wherein the software service comprises a web service and wherein the definition of the first object has been published in a registry* (e.g., col.11: 24 – col.12: 63; col.15: 59 – col.16: 31).

Claim 22:

Yeh discloses *a method for processing a transaction* (e.g., FIG. 1, col.11: 24 – col.12: 63), *comprising:*

receiving a transaction request (e.g., FIG. 17, blocks 510-514, col.20: 59 – col.21: 14; FIG. 16, elements 214, 220, 224, and related text);

generating a first object associated with the transaction request (e.g., FIG. 17, block 514-532, col.19: 24 – col.20: 24; FIG. 16, elements 300, 220, 224, 320, and related text);

converting the first object into a first document written in a self-describing language (e.g., FIG. 17, blocks 532-540, col.11: 24 – col.12: 63; FIG. 16, elements 320-340); *and*

converting the first document into a first transaction message (e.g., FIG. 17, blocks 540-550, col.20: 59 – col.21: 14)

according to a schema associated with a first transaction type determinable from the first document (e.g., FIG. 13, FIG. 13, verifying transaction message types, col.19: 10 – col.20: 24; a plurality of schema definitions DTDs generated in response to the plurality of transaction message types, col.16: 21 – col.17: 30; col.17: 32 – col.18: 67).

Claim 23:

Yeh discloses *the method of Claim 22, wherein the self-describing language comprises Extensible Markup Language (XML) or any version thereof* (e.g., col.9: 27-54).

Claim 24:

Yeh discloses *the method of Claim 22, wherein the self-describing language comprises HyperText Markup Language (HTML) or any version thereof* (e.g., col.14: 43 – col.15: 12).

Claim 25:

Yeh discloses *the method of Claim 22, further comprising: sending the first transaction message to a message format service* (e.g., col.1: 32-62; col.4: 26-65).

Claim 26:

Yeh discloses *the method of Claim 22, further comprising:*

receiving a second transaction message (e.g., col.12: 32-67);

converting the second transaction message into a second document according to a schema associated with a second transaction type determinable from the second transaction message (e.g., col.15: 12-38; col.19: 24 – col.20: 24); *and*

wherein the second document is written in the self-describing language (e.g., col.15: 59 – col.16: 31).

Claim 27:

Yeh discloses *the method of Claim 26, further comprising: converting the second document into a second object* (e.g., col.20: 26 – col.21: 12).

Claim 28:

Yeh discloses *the method of Claim 27, further comprising: receiving the second object in response to the transaction request* (e.g., col.11: 24 – col.12: 63).

Claim 29:

Yeh discloses *the method of Claim 28, further comprising: wherein the self-describing language comprises Extensible Markup Language (XML)* (e.g., col.11: 4 – col.12: 21).

Claim 30:

Yeh discloses *the method of Claim 22, wherein the first object is generated by a web service and wherein the definition of the first object has been published in a registry* (e.g., col.16: 21 – col.17: 30; col.19: 10 - col.20: 24).

<div align="center">

Conclusion

</div>

9. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thuy Dao/   /Tuan Q. Dam/
Examiner, Art Unit 2192   Supervisory Patent Examiner, Art Unit 2192